

Rights to Fish and Rights to Manage: A Note on the Portuguese Fisheries Case

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Abstract - Rights Based Management schemes have already been experimented in some specific fisheries and localizations. These experiences have a lot of teaching results about good practices of sustainable management but, also, about the limitations and risks of these tools.

The aim of this paper is to evaluate the Portuguese experience with RBM. Our analysis highlights the participatory approach that is developed in the case of sardine fisheries, a proposal of management regime that is very interesting in the sense that it is not possible to talk strictly of rights to fish but, better, in “rights to manage”.

Keywords: Rights Based Management, Fisheries, Portugal

1. Introduction

One of the most relevant issues in the discussion of Common Fisheries Policy Reform is the subject of Rights Based Management and the feasibility of its introduction in the conservation and management regime of European fisheries, after 2012 (see, in the last number of this review, Coelho, Filipe & Ferreira, 2011).

All fisheries management systems in the world introduced, in the last two decades, some form of use rights to face the problems derived from the “common property” nature of fisheries. The idea of creating markets for fishing rights as a means of internalizing the externalities received considerable attention by the researchers in Fisheries Economics. Recently, a growing number of scientists and decision makers in this area went on supporting the role of this kind of tools in the design of Fisheries Policy.

The basic “format” is to create a market of individual transferable quotas (ITQs) and confide in the self-regulation of such a system to conduct the fisheries to the economic efficiency and to promote inter-temporal sustainable use of resources. But there are other interesting possibilities of making fisheries management with schemes that have a rights based proposal in its core fundamentals.

In general, first it is needed to determine the TAC (total authorized capture) that guaranties the sustainable use of the fish stock and divide this total amount in several unit quotas that are distributed between the fishing enterprises. Then, a market for quotas can also be created. The objective is that, because they are the

“real owners”, fishermen enterprises will internalize the effects of externalities. In the long run, the property rights will be driven to the most efficient agents, those that can allocate the resources in a perspective of optimal sustainable use along the time.

Rights Based Management schemes have already been experienced in some specific fisheries and localizations. These experiences have a lot of teaching results about good practices of sustainable fisheries management and also about the limitations and risks of these tools. But these methods are always studied in a perspective that highlights the “privatization” character associated with this solution. Of course, this is not unexpected. But, even in this kind of rights privatization, there is the expectation that the results of cooperation among enterprises could perform better solutions in resource use, especially when realizing that there is the facing of a “common”, renewable, mobile resource.

2. RBM in Portuguese Fisheries

“Fisheries” is an important sector in Portugal: almost 1% of gross value added. Seafood consumption per capita is one of the highest in Europe.

In the context of Fisheries Policy, the use of Rights Based Management (RBM) schemes in the Portuguese fisheries is still recent. The analysis of this experience is a “work in progress”. An interesting study carried out for the European Commission by a Consortium of Fisheries Research Centers¹ achieved relevant conclusions summarized below.

Currently, Portugal uses three types of RBM systems to manage its fisheries.

In general terms, drivers to the implementation of RBM systems in Portuguese fisheries have been conditioned by resource sustainability and fleet and community balanced equilibrium, at least in the short term.

Table 1: Portuguese Fisheries - RBM Systems

<ul style="list-style-type: none"> ▪ An ITQ system to manage the demersal fishery in waters of the NAFO (North Atlantic Fisheries Commission), Svalbard, and NEAFC (North East Atlantic Fisheries Convention) and Norway. These are mixed fisheries developed by trawlers that harvest demersal stocks as cod, and other species as shrimp, mackerel, blue whiting, herring, red fish, tusk, Greenland halibut, horse mackerel, etc.
<ul style="list-style-type: none"> ▪ Another ITQ system utilized in the swordfish fishery in the areas of jurisdiction of ICCAT (International Commission for the Conservation of Atlantic Tunas); It is applied to long-liners fishing to the north of 5° N parallel.
<ul style="list-style-type: none"> ▪ A Community quota approach applied to POs (Producer Organizations) comprising coastal boats fishing sardine. This is an approach in which POs receive a ceiling of catches by the national authorities but have the autonomy to impose restrictions on the vessels number of fishing days and catches.

3. ITQ Systems

In the first experiences of RBM, those that relates to ITQs systems, the main instrument used to manage fishing effort is an annual license to fish. The authorities grant licenses and permits on the basis of several criteria and requirements: status of the stock, operating areas, previous year's catch, gear selectivity, amount of fishing gear per vessel, vessel's characteristics and condition. Cases of repeated failure to comply with the rules may be cause for retirement.

3.1. Demersal Fisheries

In 1992, individual quotas per vessel were allocated for the first time. The objective was to regulate the distant water fishing, especially in the NAFO areas. These use-rights per vessel are transferable but subject to prior authorization. The bundle of property rights considers 13 trawlers fishing in these waters.

The fundamental problem to face is the difficult situation of some straddling stocks (as cod) that were the most focused species of this activity. Long distance fisheries always had a special tradition in Portuguese fisheries and presented perhaps the most efficient segment in the sector (at least, the best in terms of fleet modernization).

Quotas are established annually and depend on the level of the TAC. The surpassing of a given vessel's quota implies the reduction of its next year's share by the amount exceeded. Initial allocation of rights was undertaken on historical catch records.

Transfer of rights is allowed between boats in the initial census. Transfer between Portuguese boats and other Member States boats are allowed but only after permission from the Portuguese administration authorities.

There is a limit on participation, which is restricted to boats in the group of vessels established by Government Decision. New entrants can only enter the fishery when buying a vessel from the fleet. No new vessels and no new licenses are allowed. However, a new boat may replace an old one.

3.2. Swordfish Fisheries

Portugal also applies an ITQ system in the swordfish fishery that is based on a TAC recommended by ICCAT.

There are 61 vessels that participate in this swordfish fishery.

The Regulament 1221-A/97 established the census of long-liners with rights to fish in ICCAT waters to the north of 5° N. The census, established in 1997, comprises 52 vessels with fishing rights. Up to 9 long-liners of the census could be able to fish to the south of the parallel of 5° N but have to obtain a permit from the authorities and demonstrate navigation and security conditions. These fishing rights can be withdrawn or modified by national or Community decision.

Vessels that fish in the northern zone may fish in the southern zone but are allowed to catch swordfish only as an accessory catch and cannot surpass the 5% of the total catches per vessel.

The initial allocation of rights was done through historical catch records.

Transfer of rights is allowed only between boats in the long-line fleet. Limits on participation are restricted to boats in the original census. Transfer of right is allowed but it has to be communicated to the concerned authorities. As in the previous case, new entrants can only access to the fishing rights by buying a vessel from the fleet. No new vessels, and thus no new licenses, are allowed, but a new boat may replace an old one.

Note that no other Member States have access to the fishing rights distributed by Portugal under this RBM system.

The evaluation that can be made about the performance and risks of this management schemes leads to some significant conclusions, even if the research takes only at an "exploratory" level.

The first element to highlight is that there is no reference to concentration of fishing rights and the legislation does not make any special provision to avoid it. This is very interesting because it relates the most usual and important limitation that is appointed to this type of regulation methods: the possible concentration of property. In fact, a strong market power in a few hands of enterprises will lead to economic inefficiency.

Second, ITQs in demersal fisheries may have an impact on discards, but information is not yet available. It must be noted that separating the effects of discards from this approach could be difficult in a trawling fishery because by-catch is an issue closely related to

the trawling technology, especially in cases of mixed fisheries. Discarding of non-targeted species shall exist regardless of the rights based regime system.

In spite of this, everyone recognizes that the issue of individualization of quotas (allocation to individual fishermen) may exacerbate high grading and, in the absence of strong regulations to deter discarding, there may be an incentive for a certain level of discarding. But isolating and assessing the impact is a difficult issue to address.

4. “Rights to Manage” in Sardine fisheries

The third situation described in the table is very interesting in the sense that it is not correct to talk strictly of rights to fish but instead, better, in “rights to manage”.

Sardine is the main Portuguese species in terms of catch (36% of total landings).

The *participatory* approach that is applied to the case of sardine fishery involves 151 purse seiners.

In the past few years, this participatory approach to resource management has allowed national authorities and Producers Organizations to ensure the control and surveillance of the sardine fishery.

An important attention is given to the status of the stock and its capacity of recovery. Sardine is managed under an ‘Action Plan’ that aims at wider protection of juveniles and regulates harvesting and marketing. The measures adopted include restrictions on catches, catch handling and marketing. They also include annual restrictions on fishing effort and on the volume of landings by group of vessels in each PO.

The ‘Action Plan for Sardine’ takes technical restrictions that set up restrictions on the sardine fisheries. These regulations establish the limit of days to fish sardine - 180 days per boat. Portuguese authorities impose catch ceilings on POs based on scientific recommendations but can also grant rights to POs that are consequently empowered to impose restrictions (daily catch limits) to fishing boats.

POs receive a catch allocation from the Fisheries Administration and then divide it among its vessels. What is interesting is that the cooperation among POs (for example, in the Peniche area) has a significant role in the process of defining certain rules and fishing restrictions that may also surpass the proposed government measures, with the objective of better recovery of the stocks.

In the case of Peniche (Peniche is the Portuguese most important port of sardine landings), see Filipe, Ferreira & Coelho (2008) about the role of the two most important Producers Organizations – FENACOOPESCAS & OPCENTRO

Rights are allocated to POs permanently. Vessels can be transferred from one PO to another but the catch ceiling set up for the PO receiving the new boat may not

be surpassed. This may lead to revision of the PO catch allocation.

Initially rights were allocated to POs by authorities on a historical harvest record basis. Newcomers are permitted to enter when buying a vessel. This is a coastal fishing activity. Therefore there is no access to nationals of other States member of EU.

In the case of sardine fisheries, the rights to manage can be seen as common pool rights for the members of the PO, thus concentration does not take place among the members.

There are some issues that relate the eventual capacity /necessity of protection of small- scale fisheries in the coastal areas. In fact, small purse seiners (< 50 GRT) also participate in the fisheries thus holding a right to access the resource. However, particular protective measures for small-scale are not found.

Effects on discards were not identified. As a fishery based on a small pelagic species, it is not expected to have acute discard problems. Moreover, the cooperation between the players in the game of such a participatory and community based approach may discourage discards and other undesirable behavior.

5. Conclusions

There is also a huge space for researching the impacts of a more extensive application of Rights Based Management to the European Fisheries.

The evaluation of Portuguese experience is interesting because it leads to the analysis of the impacts of different proposals of RBM schemes.

In particular, it seems very interesting (and deserving a more profound analysis) the case of sardine fisheries. The participatory approach to the proposed resource management is especially relevant because it introduces the possibility of “rights to manage” rather than rights to fish and puts another expectation on the issue of cooperation among partners.

With this approach it seems that a situation close to a “res communes” regime is being faced, in the sense of Bromley: the true “common property”, with a group of co-owners, perfectly defined, that manage the resource. The key words of such a proposal are “Co-Management”, Self-regulation and Cooperation.

In all the three cases summarized, there are important issues relating the social problems and the form they are faced in each of these approaches. The fundamental issue of rent distribution is not yet well documented and evaluated. But, of course, it is referred in all the interviews with the agents: fishermen, owners of the vessels, fishermen families, and coastal area authorities. It is an important area of future research.

6. References

- [1] ANDERSON, T. ARNASON, R. & LIBECAP, G. (2010); “*Efficiency Advantages of grandfathering*

- in rights-based fisheries management*", NBER Working Paper Series, N° 16519.
- [2] ARNASON, R. (2009), Conflicting uses of marine resources: Can ITQs promote an efficient solution?, *Australian Journal of Agricultural Resource Economics*, 53(1), pp. 145-174.
- [3] ARNASON, R. (2005), "Property rights in fisheries: Iceland's experience with ITQs" *Review of Fish Biology and Fishing*, Vol.15, pp. 243-64.
- [4] ARNASON, R. (2002), "A Review of international Experiences with ITQ. Annex to Future Options for UK Fishing Management", Report to the Department for the Environment Food and Rural Affairs, CEMARE, University of Portsmouth.
- [5] BROMLEY, D. (1991), "Testing for Common Versus Private Property: Comment", *Journal of Environmental Economics and Management*, Vol. 21, N° 1, pp 92-96.
- [6] CLARK, C. (1985), *Bioeconomic Modeling and Fisheries Management*, John Wiley & Sons.
- [7] CLARK, C., MUNRO, G. & SUMAILA, U. (2010), "Limits to the privatization of fishery resources", *Land Economics*, 86 (2), pp. 209-218.
- [8] COELHO, M. (2010), "Rights Based Management and the Reform of the Common Fisheries Policy: An Evaluation of the Portuguese Experience", Working Paper, Departamento Economia /SOCIUS- ISEG WP 18/2010/DE/SOCIUS
- [9] COELHO, M. (2003), "Sobre Comuns e Tragédias – Recursos Naturais e Direitos de Propriedade", *Proceedings do V Encontro de Economistas de Língua Portuguesa*, Recife, www.decon.ufpe.br/veelp.
- [10] COELHO, M., FILIPE, J. & FERREIRA, M. (2011), "Rights Based Management and the Reform of the Common Fisheries Policy: The Debate", *International Journal of latest Trends in Finance and Economic Sciences*, Vol. 1, N° 1, pp.15-21.
- [11] COELHO, M., FILIPE, J. & FERREIRA, M. (2010), "On Commons, Anticommons and Tragedies", In *Homenagem ao Professor Doutor Adelino Torres*, Coleção Económicas, Série II, N° 14, Romão, Silva & Ferreira (Eds.), Almedina, Lisboa, pp.587-600.
- [12] COELHO, M., FILIPE, J. & FERREIRA, M. (2009), "The Quota Hopping Case: Common Fisheries Policy between Market and Law", *Proceedings of 9th ESA Conference*, RS06 Maritime Sociology, Lisboa.
- [13] COELHO, M. e LOPES, R. (1999), "The Common Fisheries Policy and the Feasibility of ITQ's", in Hatcher and Robinson (Ed.), *The Definition and Allocation of Use Rights in European Fisheries*, CEMARE/University of Portsmouth.
- [14] CONRAD, J. (1999), *Resource Economics*, Cambridge University Press.
- [15] COMISSÃO DAS COMUNIDADES EUROPEIAS (2009), *Livro Verde. Reforma da Política Comum de Pescas*, COM (2009)163 final , Bruxelas.
- [16] COPES, P. (1986), "A critical Review of the individual quota as a device in fisheries management", *Land Economics*, Vol. 62, n° 3, pp.278-291.
- [17] COPES, P. (1996), "Social Impacts of Fisheries Management Regimes based on Individual Quotas", Discussion Paper 96/3, Simon Fraser University.
- [18] CHRISTY, F (1973), "Fisherman Quotas: A tentative suggestion for domestic management", Occasional paper N. 19 of the Law of the Sea Institute, University of Rhode Island.
- [19] EUROPEAN COMMISSION (2009), "Common Fisheries Policy, Laying the foundations for the future", *Fisheries and Aquaculture in Europe*, N°44.
- [20] EUROPEAN COMMISSION (2009), *Reflections on further reform of the Common Fisheries Document*, Commission Working Document.
- [21] FILIPE, J., FERREIRA, M. & COELHO, M., (2008); "The Drama of the Commons. An application of Cournot-Nash Model to the Sardine in Portuguese waters. The effects of collusion"; *Journal of Agricultural, Food and Environmental Sciences*; Vol. 2, Issue 1.
- [22] FILIPE, J. , COELHO, M. e FERREIRA, M. (2007), *O Drama dos Recursos Comuns*, Sílabo Ed, Lisboa.
- [23] HANNESSON, R. (2004), *The privatization of the Oceans*, Cambridge, The MIT Press.
- [24] LIBECAP, G. (2007), "Assigning property rights in the common pool: Implications of the prevalence of first possession rules for ITQs in fisheries", *Marine Resource Economics*, 22, pp. 407-423.
- [25] MRAG, IFM, CEFAS, AZTI Tecnalia & PoIEM (2007); *An Analysis of existing Rights Based Management Instruments in Member States and on setting up best practices in the EU*, Parts I & II, European Commission, FISH/2007/03.
- [26] NEHER, P., ARNASON, R. & MOLLET. N. (eds) (1989), *Rights Based Fishing*, Dordrecht, Kluwer Academic Publishers,
- [27] SCHLAGER, E. & OSTROM, E. (1992), "Property-Rights Regimes and Natural Resources: A Conceptual Analysis", *Land Economics*, Vol. 68, N° 3, pp. 249-262.